

CLAIMS

What is claimed is:

1. A wearable display apparatus worn near left and right eyes of a user and to display images to be recognized through the left and right eyes, comprising:

a main control unit outputting view display position adjustment information corresponding to inputted interpupillary distance setting information indicative of an interpupillary distance between the left and right eyes; and

display units respectively display-processing image information inputted to an area within a display region corresponding to the view display position adjustment information, the display region being smaller than an entire view display area of the display units.

2. The wearable display apparatus as claimed in claim 1, further comprising:

a key input unit producing the interpupillary distance setting information in correspondence with a manipulation by the user.

3. The wearable display apparatus as claimed in claim 1, further comprising:

a sensor mounted on a main body, detecting the interpupillary distance of the user, and outputting the interpupillary distance setting information to the main control unit.

4. The wearable display apparatus as claimed in claim 1, wherein the display units comprise:

a first display unit having a first display device mounted on a main body to display an image to the left eye of the user, and a second display unit having a second display device mounted on the main body to display an image to the right eye of the user,

said first and second display device each comprising:

a matrix display unit displaying pixel information by selective driving of row electrodes and column electrodes, the row electrodes being arranged along a horizontal direction, and the column electrodes being arranged along a direction crossed at an angle with respect to the horizontal direction; and

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a display control unit selectively driving the row electrodes and the column electrodes to display the image at a view display position corresponding to the view display position adjustment information.

5. The wearable display apparatus as claimed in claim 4, wherein a display area of the matrix display unit is larger at a length in a horizontal direction corresponding to a direction linking a wearing position of the left and right eyes than an internally set image display area.

6. The wearable display apparatus as claimed in claim 4, wherein the display control unit comprises:

a column electrode driving unit selecting the column electrodes and outputting image information;
a row electrode driving unit sequentially activating the row electrodes; and
a drive control unit controlling the row electrode driving unit and the column electrode driving unit to write image data to the row and column electrodes corresponding to the view display position adjustment information.

7. The wearable display apparatus as claimed in claim 7, wherein the column electrode driving unit comprises:

a plurality of flip-flops connected in series, each of the plurality of flip-flops corresponding to one of the column electrodes; and
a switch unit mounted to output to the corresponding column electrodes, image signals outputted from the drive control unit according to a signal outputted from an output port of the corresponding one of the plurality of flip-flops.

8. The wearable display apparatus as claimed in claim 8, wherein the row electrode driving unit comprises a plurality of flip-flops arranged in series, each of the plurality of flip-flops corresponding to one of the row electrodes, and having an output port connected to the corresponding row electrode.

9. The wearable display apparatus as claimed in claim 4, wherein the display control unit includes:

a row electrode driving unit selecting the row electrodes and outputting image information;

and
a column electrode driving unit sequentially activating the column electrodes;
a drive control unit controlling the row electrode driving unit and the column electrode driving unit to write image data to the row and column electrodes corresponding to the view display position adjustment information.

10. The wearable display apparatus as claimed in claim 10, wherein the row electrode driving unit comprises:

a plurality of flip-flops connected in series, each of the plurality of flip-flops corresponding to one of the row electrodes; and

a switch unit mounted to output to the corresponding row electrodes, image signals outputted from the drive control unit according to a signal outputted from an output port of the corresponding one of the plurality of flip-flops.

11. The wearable display apparatus as claimed in claim 8, wherein the column electrode driving unit comprises a plurality of flip-flops arranged in series, each of the plurality of flip-flops corresponding to one of the row electrodes, and having an output port connected to the corresponding row electrode.

12. A method of controlling a wearable display apparatus formed to be worn near to both eyes of a human body and of displaying images to be recognized through the eyes, comprising:

outputting view display position adjustment information corresponding to inputted interpupillary distance setting information indicative of an interpupillary distance between the left and right eyes; and

display-processing image information inputted to an area within a display region corresponding to the view display position adjustment information, the display region being smaller than an entire view display area of the display unit.

13. The method as claimed in claim 13, wherein the interpupillary distance setting information is produced by a manipulation of the user.

14. The method as claimed in claim 13, further comprising:
detecting the interpupillary distance setting information using a sensor mounted in a main body.

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15. An apparatus comprising:
display units display-processing image information inputted to an areas corresponding to a view display position adjustment information of a main control unit to view on the display units.
16. An apparatus according to claim 15, wherein the view display position adjustment information corresponds to inputted interpupillary distance setting information indicative of an interpupillary distance between left and right eyes of a user.
17. An apparatus according to claim 16, wherein the interpupillary distance setting information for the user is set without movements of an optic system.

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